

**ANNUAL ADMINISTRATIVE REPORT (FY2000) AND
WORK PLAN (FY 2001) FOR INVENTORIES AND VITAL SIGNS
MONITORING**

FY2000-FY2001

NATIONAL CAPITAL NETWORK

National Capital Network Approval Signatures

John Howard, Superintendent, Antietam National Battlefield Chair, National Capital Network Board of Directors	Date
Ellen van Snik Gray, Natural Resources and Science Inventory and Monitoring Coordinator, National Capital Region	Date
Marcus Koenen, Natural Resources and Science Biological Inventories Coordinator, National Capital Network	Date
Jim Sherald, Natural Resources and Science Chief, Natural Resources and Science	Date

I. Overview and Objectives

The National Capital Network includes eleven national parks with significant natural resources in the District of Columbia, Virginia, Maryland, and West Virginia. In FY00, the network received funds for conducting inventories of vertebrates and vascular plants from the Servicewide I&M program. The network began the process of hiring key personnel, populating NPSpecies, data mining, identifying data gaps, and identifying priorities for inventories of the network parks. Subject matter experts reviewed the network's existing inventory data, estimated its percent completion, and suggested priorities for future surveys. A five-year study plan was written outlining priority inventory work to be conducted in the network's parks. In FY01, the network became one of seven networks that received \$150,000 start up funds for initiating the monitoring program from the Servicewide I&M program. In addition, the Network received \$71,000 from the Water Resource Division to initiate a Water Quality Monitoring Plan.

The Vital Signs Monitoring: Vision and Implementation Plan identified seven recommended steps for developing a monitoring program:

1. Form a network Board of Directors and Science Advisory Committee.
2. Summarize existing data and understanding.
3. Prepare for and hold a scoping workshop.
4. Write a report on the workshop and have it widely reviewed.
5. Hold meetings to decide on priorities and implementation approaches.
6. Draft the monitoring strategy.
7. Have the monitoring strategy reviewed and approved.

Accordingly, priorities for FY01 include the hiring of key personnel including a Network Monitoring Coordinator, Data Manager, and Biological Science Technician to initiate this work plan, establishing a Board of Directors and a Science Advisory Committee, and beginning to summarize data for vital signs scoping sessions.

II. Accomplishments (FY200) and Scheduled Activities (FY2001)

A. Biological Inventories

Objective 1 – Hire key personnel to coordinate the network inventories.

- FY 2000 Accomplishments: A regional Inventory and Monitoring Coordinator and a network Biological Inventories Coordinator were hired to coordinate the network inventories.

Objective 2 – Compile and evaluate existing data for each park into NPS databases (all parks).

Task 1.1 – Compile and evaluate existing data on vertebrates and vascular plants and enter them in a consistent format into NPSpecies, NPBib, Database Template and the Dataset Catalog.

- FY 2000 Accomplishments: (1) The Biological Inventories Coordinator contacted each park to compile existing inventory data for inclusion into NPSpecies. (2) Data entry was initiated by the park natural resource managers and the Biological Inventories Coordinator to populate NPSpecies.
- Scheduled FY 2001 Activities and Products: (1) Continue checking data content in NPSpecies to ensure quality. (2) Locate additional inventory related reference material including observations, vouchers, and literature. (3) Coordinate data entry with parks, contractors, and WASO.

Task 1.2 – Compile existing GIS themes and modify them to be consistent with the GIS Theme Browser.

- FY 2000 Accomplishments: The NPS GIS Theme Browser was beta tested by the regional GIS Specialist.
- Scheduled FY 2001 Activities and Products: (1) The NPS GIS Theme Browser will be populated with existing GIS themes by the regional GIS Specialist. Each theme will be evaluated to determine if it is compatible with the browser and if FGDC-compliant metadata exist.

Task 1.3 – Convert existing hard copy maps to digital GIS format.

- Scheduled FY2001 Activities and Products: (1) A network data manager will be hired. (2) The Data Manager will evaluate existing hard copy maps for their utility and feasibility to be incorporated into GIS.

Task 1.4 – Adapt Database Template to National Capital Network I & M projects.

- Scheduled FY2001 Activities and Products: (1) A Database Template will be created for the NPS Bird Inventory. (2) The Database Template will be populated with data collected by volunteers surveying six parks including Antietam National Battlefield, Catoctin Mountain Park, Harpers Ferry National Historical Park, Manassas National Battlefield, Prince William Forest Park, and Wolf Trap Farm Park. (3) Summarize and report data as needed.

Objective 3 – Evaluate existing inventory data and gaps and write 5-year study plan for vertebrate and vascular plant inventories (all parks).

Task 3.1 – Subject Matter Expert review of existing inventory data to estimate percent completion.

- FY 2000 Accomplishments: (1) Subject Matter experts were contracted to review taxa lists by park and identify inventory gaps in each park. Experts included: fish - Dr. Rich Raesly, Frostburg State University; mammals - Dr. Richard Thorington, Division of Mammals, Smithsonian Institution; birds - Deanna Dawson, USGS – Patuxent Wildlife Research Center; herps - Dr. Joe Mitchell, University of Richmond; vascular plants - Dr. Chris Frye, State Botanist, Maryland Department of Natural Resources and Chris Lea, Ecologist, Assateague National Seashore. (2) Products included suggested sampling strategies to fill data gaps and lists of expected species in each park. Funding allocation: NA

Task 3.1 – Hold network meetings to prioritize inventory work.

- FY 2000 Accomplishments: (1) The I&M Coordinator and Biological Inventories Coordinator developed a matrix of estimated percent completion for each park and taxonomic group. (2) Each park was contacted to identify species of special concern. (3) The National Capital Network Inventory and

Monitoring Committee, including representatives from each NCN park, network I&M staff, and regional biologists, met to prioritize inventory gaps for each taxonomic group as well as the species of special concern.

Task 3.1 – Write 5-year study plan for biological inventories.

- FY 2000 Accomplishments: (1) Natural resource managers at each NCN park wrote park descriptions for the study plan including significant natural resources, park history, species of special concern, and management problems. (2) The I&M Coordinator and Biological Inventories Coordinator compiled information from the NCN prioritization meeting and subject matter expert reports into the study plan. (3) The NCN study plan was reviewed by the network, revised, and submitted to WASO.

Objective 4 – Complete the documentation of 90% of vertebrate and vascular plant species in the parks through targeted field investigations.

Task 4.1 – Mammal surveys (new project for FY 2000)

Parks involved (small mammals): ANTI, CATO, CHOH, GWMP, HAFE, NACE, ROCR, WOTR

Parks involved (medium/large mammals): ANTI, CHOH, GWMP, HAFE, ROCR

- FY 2000 Accomplishments: (1) A cooperative agreement was established with Dr. William McShea of the Smithsonian Institution to conduct a two-year study to determine the presence, relative abundance, and distribution of small, medium, and large mammal species in selected NCN parks. Project will begin in FY 2001. Funding allocation: NA
- Scheduled FY 2001 Activities and Products: (1) Dr. McShea and his team will begin visiting parks, determining sampling sites, and obtaining relevant GIS themes in the winter of 2000. (2) Small mammal trapping will occur from April to October of 2001. (3) Infra-red trip cameras will be set up to document medium to large mammals for one week in the winter and summer months.

Task 4.2 – Distance sampling for deer density estimation (new project for FY 2000)

Parks involved: ANTI, CATO, CHOH, GWMP, MANA, MONO, NACE, PRWI, ROCR

- FY 2000 Accomplishments: (1) An interagency agreement was established with Dr. Brian Underwood of the U.S. Geological Survey to conduct distance sampling to estimate deer density and herd composition in selected NCN parks, as well as to conduct a training session for NCN natural resource managers. Project will begin in FY 2001. Funding allocation: \$20.0k.
- Scheduled FY 2001 Activities and Products: (1) Dr. Underwood and his team will conduct a training session for NCN natural resource managers and NCR staff to demonstrate how to conduct and analyze distance sampling for deer density estimation. (2) Each park will be visited from October 2000 to June 2001. A final report is expected in FY 2002.

Task 4.3 – Inventory of breeding, wintering, and migrating bird species (new project for FY 2001)

Parks involved: ANTI, CATO, HAFE, MANA, PRWI, WOTR

- Scheduled FY 2001 Activities and Products: (1) Develop NPS Bird Inventory protocol including data sheets, instruction manual, and maps. (2) Identify volunteer participants by promoting NPS Bird Inventory with local bird clubs through presentations, newsletters, and a web page. (3) Coordinate site visits to each park with volunteers and Resource Managers. (4) Centralize data management (See Objective 2, Task 1.4).

Task 4.4 – Inventory of reptiles and amphibians (new project for FY 2001)

Parks involved: CATO, CHOH, GWMP, HAFE, MANA, MONO, ROCR, WOTR.

- Scheduled FY 2001 Activities and Products: (1) A request for proposals will be sent out and a cooperative agreement established to conduct reptile and amphibian inventories in selected NCN parks.

B. Vital Signs Monitoring

Objective 1 – Hire key personnel to implement the network monitoring program. A Network Monitoring Coordinator, Data Manager, and Biological Science Technician will be hired and stationed at the Center for Urban Ecology (CUE) with the National Capital Region's Natural Resources and Science staff. The I & M staff will be supervised by the National Capital Region I & M Coordinator. A Hydrologist is being hired to help design and implement a Network Water Quality Monitoring Plan in coordination with the I & M program. The position will be supervised by the Regional Hydrologist and stationed at CUE.

Objective 2 – Form a Board of Directors and Science Advisory Committee (SAC).

Task 1.1. – Form a Board of Directors (BOD). The BOD composed of superintendents or their assigned designee provides overall guidance and oversight to the I & M program. A BOD will be formed and the first meeting is planned for fall 2001 to review the scope of work for FY01 and FY02.

Task 1.2 – Develop a charter outlining the operating procedures of the Board of Directors. A charter will be written, reviewed and approved by the Board of Directors and submitted to WASO.

Task 1.3 – Form a Science Advisory Committee (SAC) to provide technical recommendations to the BOD and assist with data gathering and scoping sessions. The SAC will be composed of resource managers, scientists familiar with the parks in the region, and I & M staff. A complete list of participants will be presented to the BOD for approval.

Objective 3 – Summarize existing data and understanding and prepare for vital signs scoping workshops.

The Monitoring Coordinator and Biological Science Technician will review Resource Management Plans and summarize current and historical monitoring programs in the region including fire effects, threatened and endangered species, water quality, air quality, physical processes, and other resources.

Superintendents and resource managers will be interviewed from each park in the network to identify current and needed monitoring activities. In addition, monitoring conducted by neighboring agencies, partners, and parks will be summarized for the region. This information will provide essential background information for future scoping sessions. It is anticipated that completing this task and compiling the information into a report will take a year.

Objective 4 - Annual administrative report and work plan for inventories and vital signs monitoring – FY2001. A combined annual report for FY2001 and work plan for FY2002 for inventories and vital signs monitoring with its associated budget will be prepared by the regional I & M Coordinator and presented to the BOD in September for review, modification, and approval.

Objective 5 – Vegetation Mapping. Vegetation maps are a critical data layer needed for designing monitoring programs. Accordingly, we will evaluate the possibility of contributing to a regionwide vegetation mapping project.

Objective 6 – Water Quality Monitoring Plan. A Water Quality Monitoring Plan will be submitted to the Water Resources Division to allocate funding for \$71,000 during this fiscal year. A term hydrologist position description will be developed and announced. The successful candidate will plan and design a water quality monitoring plan based upon elements from the Clean Water Act and the state's Water Quality Management Plan in which the park is located. This will be conducted in coordination with the I & M Program.

Specific tasks include:

1. Specify an approach for identifying and prioritizing short and long-term water quality monitoring needs for parks in the NCN;
2. Identify water resource inventory gaps in data;
3. develop monitoring protocol according to servicewide standards;
4. Define goals for project planning, funding, logistics, and implementation; and
5. Determine data management needs and protocols following servicewide water quality monitoring standards (e.g. EPA-STORET legacy system).

III. Staffing

Ellen Gray, National Capital Region I&M Coordinator

Network Monitoring Coordinator, TBA

Marcus Koenen, Biological Inventories Coordinator

Data Manager, TBA

Biological Science Technician, TBA

Doug Curtis, Regional Hydrologist

Network Hydrologist, TBA

IV. Budget

NA